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ENGLISH TRANSLATION OF THE AMENDED SHEETS OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Claims

1. Characterisation process for a nitrogenous base, a nucleic acid, or a nitrogenous base of a nucleic acid, fixed on a support, the said process consisting of characterising the said nucleic acid or the said nitrogenous base without marking by a mirage effect method.

2. Quantification process for a nitrogenous base, a nucleic acid, or a nitrogenous base of a nucleic acid, fixed on a support, the said process consisting of quantifying the said nucleic acid or the said nitrogenous base without marking by a mirage effect method.

3. Mapping process for nitrogenous bases, nucleic acids, or nitrogenous bases of nucleic acids, fixed on a support, the said process consisting of mapping the said nucleic acids or the said nitrogenous bases without marking by a mirage effect method.

4. Process for manufacturing a nucleic acid biochip formed particularly of a support on which at least one nucleic acid synthesised in situ is fixed, the said process comprising at least one synthesis and analysis cycle, particularly including firstly coupling of a nitrogenous base for in situ synthesis of the said nucleic acid fixed on the support, and secondly an analysis intended to check the coupling of the said nitrogenous base, the said analysis being done using a characterisation process according to claim 1,

quantification process according to claim 2, or a mapping process according to claim 3.

5. Process according to any one of claims 1 to 4, in which the mirage effect method is a photothermal deflection method.

6. Process according claim 5, in which the nitrogenous base, the nucleic acid or the nitrogenous base of the nucleic acid is illuminated by a pump beam originating from an excitation source, and absorption, deviation or reflection of light originating from the excitation source by nucleic acid, or by the nitrogenous base, is detected or measured using a probe beam.

7. Process according to claim 6, in which the pump beam is coherent light.

8. Process according to claim 7, in which the probe and pump beams intersect.

9. Process according to claim 6 or 7, in which the probe and pump beams are in transverse or collinear configuration.

10. Process according to claim 6, in which absorption is detected or measured in a spectral range between 200 and 300 nm.

ENGLISH TRANSLATION OF THE AMENDED SHEETS OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

11. Process according to claim 7, in which the pump beam is chosen among an argon laser with a wave length of 275 nm, or a solid laser with a wave length of 266 nm.

12. Process according to claim 6, in which the excitation source is an incoherent source.

13. Process according to any one of claims 1 to 4, in which the characterisation, quantification, mapping or analysis is done in polarisation of the nucleic acid(s) present on the support.